Waste Electrical and Electronic Equipment: United Kingdom

The United Kingdom has consulted with manufacturing industry, retailers of electrical and electronic goods, and with trade associations including ICER (Industry Council for Electronic Recycling), on the EC's Waste Electrical and Electronic Equipment (WEEE) Directive. The results of the consultation process give an indication of the ultimate effect of WEEE legislation on industry and on consumers when it is enacted in local legislation.

The Government in England and Wales, Scotland and Northern Ireland has conducted a comprehensive national survey on the effect of WEEE. The Department of the Environment, Transport and the Regions (DETR), Department of Trade and Industry (DTI), the Scottish Executive, National Assembly for Wales, and the Northern Ireland Executive collaborated in the effort which distills industry, trade association, legal, academic and public opinion about the proposed WEEE Directive. The survey canvassed manufacturers, distributors, retailers and local organizations representing more than 340,000 British companies and consumer groups, and the resulting opinions were compiled by the DETR's consultants in a report issued in December 2000. Although importers of electrical and electronic equipment were not listed among the respondents, U.S. manufacturers of electrical and electronic products were identified as contributors to the survey, through their local subsidiaries.

Current Status of the Directive:

The proposed WEEE Directive has not yet achieved consensus in Europe, and the WEEE Directive is being re-introduced as a linked initiative with its sister Directive, the Restrictions on the use of Hazardous Substances in Electrical and Electronic Equipment (ROHS). Respondents to the U.K. survey accept the linkage of these Directives, since ROHS chemicals are included as constituents of concern in WEEE. The impact of WEEE, however, is much broader than that of ROHS, as some electrical appliances contain materials that contribute to the release of greenhouse gases (GHGs). Some electrical and electronic equipment also contains persistent organic pollutants (POPs) that can be inadvertently released into the environment as a direct result of the disposal process. These WEEE-derived GHGs and POPs are in addition to the six hazardous materials listed in ROHS.

Agreement with the Objective:

Although the majority of U.K. respondents (81%) agree with the fundamental objective of the WEEE Directive, viewing it as environmentally important, 70% of those in agreement consider that the cost of implementing schemes to carry it through are likely to be disproportionate to the environmental benefit that is likely to be achieved. The allocation of the cost of recovery and treatment of electrical and electronic waste between producers and consumers is seen as the major barrier to successful implementation, although the majority of those surveyed expressed a preference for WEEE recovery and treatment free of charge to the final consumer. This implies that the cost of ultimate disposal is included in the purchase price of the original equipment, or as a levy on sales within the sector, and that some equitable means of dealing with historic and orphan waste (including obsolete and abandoned equipment) is found.

Trade versus Consumer Waste:

There is a strong preference for a clear distinction to be made between industrial and commercial WEEE, and end-of-life electrical and electronic consumer products. Those surveyed ask that additional consideration be given to the collection and disposal mechanisms, and incentives that might be used in each case. Comments received relating to trade versus consumer origin of WEEE include the following points:

The useful life of industrial and commercial equipment is generally far longer than that of consumer products – up to 30 years, as opposed to an average of 5 to 10 years for most small appliances and consumer electronics products;

Information on the hazardous material content of older industrial and commercial equipment is unlikely to be readily available to those tasked with its collection and disposal;

The aggregate of recovered hazardous material (radioactive, poisonous or carcinogenic chemicals) at the disposal site may exceed the levels encountered in the manufacturing process or supply chain. This could be a significant barrier to safe recovery and disposal activity by general waste management organizations;

There will be greater uniformity of material content encountered in industrial and commercial electrical and electronic waste streams than that found in consumer electronic waste, providing a better business case for recovery and re-use of industrial WEEE. If a strong case cannot be built for the segregation of consumer WEEE by end users, there is a significant risk of contamination of the general municipal waste stream and fly tipping of electrical and electronic products.

Reactions to the Scope of the Directive:

There are 10 broad categories of equipment covered by the Directive: large household appliances; small household appliances; IT and telecommunications equipment; consumer equipment; lighting equipment; electrical and electronic tools; toys; medical equipment; monitoring and control instruments; and automatic dispensers. Most electrical and electronic manufacturers and producers see the scope of the Directive as appropriate, but would prefer a phased introduction starting with major appliances, and extending to smaller appliances and consumer equipment as experience of reuse, recycling and materials recovery is developed. In addition to the fundamental questions, there are a number of subsidiary questions, including the matter of second-user equipment which can be refurbished for a new user – does this action count toward the recycling target, to eventually provide a double count when it reaches its actual end of life?

Treatment of the Waste Stream:

In characterizing the waste stream resulting from WEEE, industry draws a clear distinction between WEEE and two other waste streams: end-of-life vehicles and batteries. End-of-life vehicles and batteries have created established secondary industries that recover useable spare parts, scrap metals and plastics, but WEEE is

unlikely to prompt the creation of similar local businesses. Local charities and community workshops that accept WEEE for refurbishment and sale have made submissions on WEEE, seeking to prevent legislation from removing one of their most important sources of fund-raising – the donation of still-useful small appliances and consumer electronics.

The ROHS chemicals (lead, mercury, cadmium, hexavalent chromium and certain flame-retardants) are present in many "difficult" products which will be returned for treatment, and since these chemicals are to be restricted from the market in all but essential uses, there is no secondary market for these recovered materials. The installed base of equipment in service prior to the entry into force of the Directive will become "historic waste", which must be recovered, treated and disposed of by someone – whether producer, consumer, or local authority, and there is no method of ensuring that technical data relating to historic waste will contain information important to its safe disposal.

British industry seeks to delay the imposition of any phase-out or outright ban on ROHS chemicals until suitable alternatives have been developed and tested. In certain electronic applications, however, most known alternatives are more costly and less effective than the ROHS chemicals that they are intended to replace.

Local manufacturers and suppliers of electrical and electronic equipment, waste management operators, and local authorities with waste collection and disposal responsibility are suggesting the introduction of sector-led trials and a phased introduction of WEEE recovery, starting with voluntary schemes. Recycling and reuse in the U.K. is less well developed than in many other EU countries, and if WEEE measures are introduced uniformly throughout the EU at the same time, the U.K. might struggle to catch us with those countries with longer experience of waste segregation and product take-back.

Opportunities for U.S.industry:

Management and audit of the equipment collection process on behalf of the equipment manufacturers affected by implementation of the WEEE legislation is the most readily apparent opportunity. There is also business potential for a privatized monitoring and compliance service, which would otherwise have to be provided by government agencies.
Since WEEE is at an early stage of development, no potential business development resulting from privatization of government services can be ruled out.

The principal electrical and electronic industry opportunity resulting from the implementation of WEEE legislation is the cost effective development and supply of non-

toxic, non-hazardous alternatives to ROHS-listed materials. This is viewed as a necessary evolutionary process in the electrical and electronic industry, and not an environmental industry activity.